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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,777

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Naoki Itano

2691-000018/US

1471

30593 7590 09/25/2007  
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EXAMINER

HEPPERLE, STEPHEN M

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

09/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/541,777

Applicant(s)

ITANO ET AL.

Examiner

Stephen M. Hepperle

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,9 and 13-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6,9 and 13-25 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

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Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Is the "main body portion" of line 11 another name for the bush body 10? There is at least an implication that the bush is part of the "main body", which is assumed to be the overall valve housing.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 13-18, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higaki et al. (JP 10-339383) in view of JP 55-20103 or Kelly et al. Higaki shows a rapidly opening regulator valve (Figs. 7-8) with a main body 10, 11. Main valve member has a valve head 22 in the inlet side 11, connected to a piston that is responsive to outlet pressure at its lower end, and to inlet pressure at its top through passages 14, 16, and 23' when disk 52 is pierced. Note moving receiving portion 9 and spring 4, which biases the valve open. The piston moves in the moving receiving portion. Cap 3 is seen as the "receiving member". Higaki shows a threaded cap 3. JP '103 shows a receiving member 26 that is threaded to the main body 2 with facing tapered areas away from assembly threads. It would have been obvious to form the two housing parts of the Higaki housing as a single housing member, as there is no relative motion between the two parts (leaving the cap as separable for service work). It would have been obvious in view of the JP '103 document to provide tapered abutting surfaces on cap 3 and the main body of

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Higaki in order to provide an additional seal to the o-ring 8. Kelly shows closing member at the top of a pressure regulator that is externally threaded, which is seen as an obvious equivalent to a closing member ("receiving member" 3) that is internally threaded as shown by Higaki. It would have been obvious to replace the internal threaded cover of Higaki with an internally threaded cover with a separate tapered contact portion above the threads (for better sealing) because the two arrangements are seen as full equivalents. Regarding claim 3, see Fig. 9. Regarding claim 5, area 25 of Higaki is essentially the same as the valve seat area. Kelly shows closing member at the top of a pressure regulator that is externally threaded, which is seen as an obvious equivalent to a closing member ("receiving member" 3) that is internally threaded as shown by Higaki. It would have been obvious to replace the internal threaded cover of Higaki with an internally threaded cover with a separate tapered contact portion above the threads (for better sealing) because the two arrangements are seen as full equivalents. Regarding claims 4 and 16, it would have been obvious to make the valve head strong enough for its intended service, including the recited tensile strength.

Claim 9 as understood is rejected under 35 U.S.C. 103(a) as being unpatentable over Higati et al. in view of Kabushiki (JP 3058841). Kabushiki (Fig. 2) shows a threaded insert 20a (reinforcing means) that includes a stopping flange at its bottom to stop threading advance. It would have been obvious to provide a reinforcing insert as taught by Kabushiki to the inlet of the Higati device for strength. Installation of the bushing is seen as providing the same strengthening function recited by applicant, as both bushings are merely screwed into the body. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pritchard et

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al. shows a regulator with embodiments having an internally threaded "receiving member" (Figs. 1-2) and an externally threaded cap (Fig. 3), showing their equivalence.

Applicant's arguments filed 13 August 2007 have been fully considered but they are not persuasive. As far as matching each individual item in each claim to the reference, it is noted that the primary reference is so similar to applicant's device that many figures and even reference numerals are identical. Therefore, there seemed to be little chance of confusion. It is still seen that one of ordinary skill in art would make certain that a valve is strong enough to survive its expected service.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pritchard shows the equivalence of an internally threaded "receiving member" (Figs. 1-2) and an externally threaded member (Fig 3). Replogle shows an internally threaded receiving member that has a tapered contact surface at an o-ring.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Hepperle whose telephone number is 571-272-4913.

The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Stephen M. Hepperle  
Primary Examiner  
Art Unit 3753

SMH